

ACTIVATE MANLY: STREETS AS SHARED SPACES

Transport Management Plan

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CONTACT



NICOLE VUKIC
Project Manger

T +61 2 8907 3932

M +61 417 233 935

E Nicole.Vukic@arcadis.com

Arcadis

Level 16

580 George Street, Sydney 2000

NORTHERN BEACHES COUNCIL ACTIVATE MANLY: STREETS AS SHARED SPACES

Transport Management Plan

Final report

Author Wendy Hu


Checker Lise Chesnais

Approver Nicole Vukic

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REVISIONS

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1 INTRODUCTION

1.1 Background

The Activate Manly project is part of a package of works that seeks to improve and activate the connections around town centres and beaches in the Northern Beaches Council Local Government Area. The Activate Manly project creates a walking and cycling-friendly link from the intersection of Darley Road with Wentworth Street all the way to Kangaroo Lane to the north via Sydney Road and Belgrave Street, as shown in Figure 1.

The town centre of Manly is already a high pedestrian activity area, with significant sections fully pedestrianised. Access to the centre and its proximity to the ferry wharf attracts cyclists for functional purposes. However, the area surrounding The Corso between Darley Road and Whistler Street, as well as these two streets provides a very constrained environment with conflicting uses, limited space for businesses and no dedicated space for cycling.

The Activate Manly project seeks to:

- Test the impact on cycling levels, pedestrian amenity, and retail attraction and activity, by reducing the space dedicated to vehicle traffic and parking as well as lowering the posted speed limit
- Increase space for safe cycling
- Improve access to the Manly centre by bicycle and on foot from the north of Manly
- Activate Darley Road and The Corso by extending outdoor seating zones for food businesses
- Ensure the safety of the travelling public by reducing posted speed limits and providing dedicated protected space for cycling
- Leverage the tools and materials of tactical urbanism to roll out the project in the upcoming months.

This project has been awarded a grant through the Streets as Shared Spaces Grant Program as a medium-term pilot project to improve or activate streets as shared public spaces.



Figure 1 Activate Manly project

1.2 Approach

The Activate Manly project will adopt the tactical urbanism approach in the implementation of proposed works.

Tactical urbanism is a community-led approach to neighbourhood building using short-term, low cost and scalable interventions intended to drive long term change. These adaptations large and small can be both from top-down policy or bottom-up intervention and represents a significant opportunity to:

- **Implement projects quicker, cheaper** – Identify opportunities to repurpose spaces in an imaginative and cost-effective manner. Tactical urbanism solutions use temporary, inexpensive materials and rapid planning and design
- **Foster community and political support** – Tactical urbanism can be used as a tool for public engagement due to the location and visibility of local projects. Through demonstrating that a solution is possible 'on the ground', project teams can build community, stakeholder, and political support for a project
- **Reduces risk** – Successful interventions clearly demonstrate real, verified, community endorsement of concept, which moreover instils a sense of community 'ownership' of the project
- **Address safety needs and infrastructure gaps** – Opportunity to address the immediate safety and infrastructure needs within the Manly town centre
- **Enhance placemaking** – Tactical urbanism projects can provide the opportunity to take spaces and make them into places by quickly transforming environments to encourage people to interact
- **Improve equity and access to public spaces** – Repurposing public spaces can address social barriers by creating community facilities and amenity, that all community members can access
- **Reallocate road space** – Tactical urbanism projects have been used to reallocate road space to better serve the needs of road users. For example, road space during the COVID-19 pandemic has been reallocated to provide more space for cycling to meet physical distancing recommendations. This provides physical distancing while encouraging greater mode share to active transport for commuting to work, school and for other trips.

There are a variety of tactical urbanism solutions currently being implemented around the world. These include pop-up bicycle lanes, temporary parklets and street closures. These projects can be delivered rapidly, from a few hours to days or weeks, and can often be transitioned into permanent projects.

The tactical urbanism approach can help address the Manly town centre's current challenges including limited space for businesses and lack of dedicated space for cycling through prototyping exemplary urban change rapidly and at low cost.

This would enable changing of behaviours and attitudes to accelerate urban transformation rather than through slower gradual step changes.

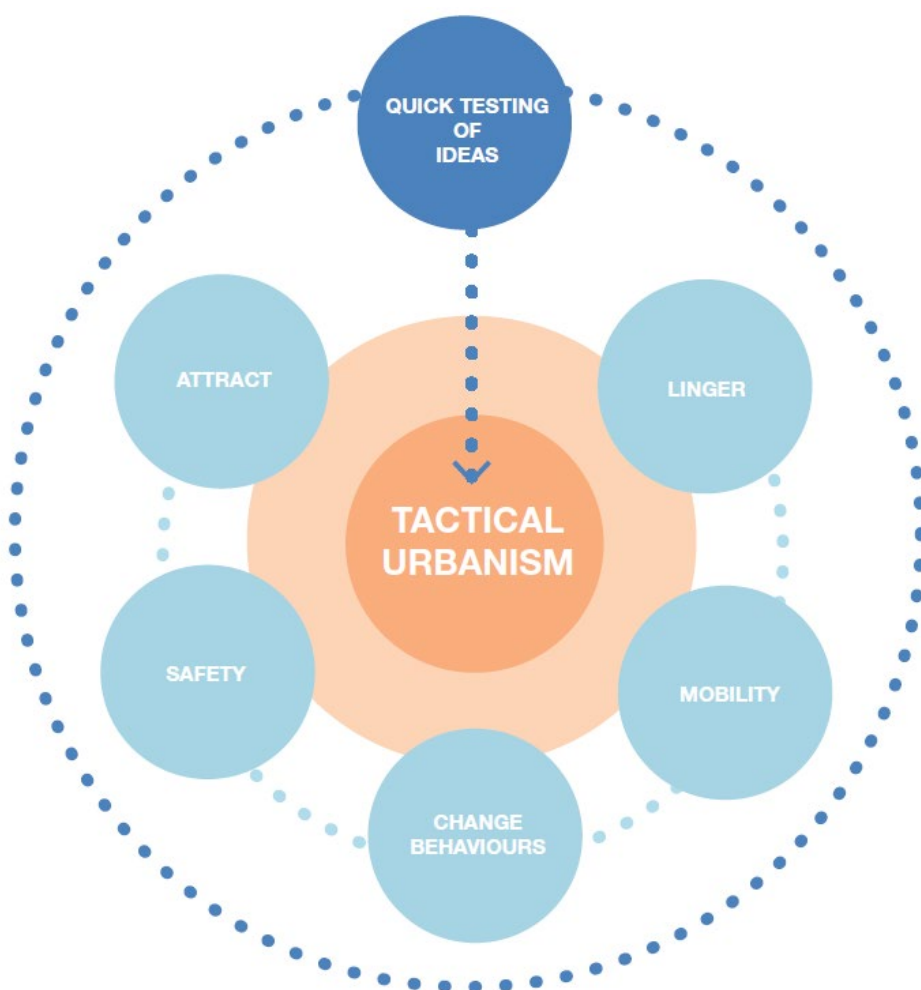


Figure 2 Tactical urbanism benefits

1.3 Purpose of this report

This Traffic Management Plan outlines the works and changes proposed under the Activate Manly project to facilitate a safer and more attractive environment, including management measures such as threshold treatments and traffic calming measures.

This report will be used for the Traffic Committee meeting in October 2020 to seek approval for the implementation of arrangements proposed under Activate Manly.

1.4 Structure of this report

The remainder of this report is structured as follows:

- **Section 2** The proposal, outlines the access arrangements and changes proposed by the project across all modes
- **Section 3** Management measures, outlines the traffic management measures proposed to enable the implementation of the project
- **Section 4** Summary of actions, provides a summary of the actions required to implement the scheme.

2 THE PROPOSAL

2.1 Overview

The Activate Manly project area runs through the Manly town centre, through Darley Road and The Corso to Whistler Street, Sydney Road, Belgrave Street and Raglan Road, ending at the intersection with Kangaroo Lane. Within the study area, all roads are classified local roads, with the exception of Raglan Street, which is a classified Regional Road.

The project creates a walking and cycling-friendly link from the intersection of Darley Road with Wentworth Street all the way to Kangaroo Lane to the north via Sydney Road and Belgrave Street. The project would provide a safe cycling route as well as to set up 10 km/h shared zones along the route for safer and more attractive walking to and from the Manly town centre. Additionally, around half of the on-street parking on The Corso and Darley Road would be converted to outdoor dining to support local businesses in their recovery from the COVID-19 crisis.

The project area can be considered in the following seven sections:

1. Darley Road – Wentworth Street to The Corso
2. The Corso – Darley Road to Whistler Street
3. Whistler Street (south) – The Corso to the car park
4. Whistler Street (north) – Car park to Sydney Road
5. Sydney Road – Whistler Street to Belgrave Street
6. Belgrave Street – Sydney Road to Raglan Street
7. Raglan Street – Belgrave Street to Kangaroo Lane.

Figure 3 shows the extent of the road sections defined for the purpose of this project.

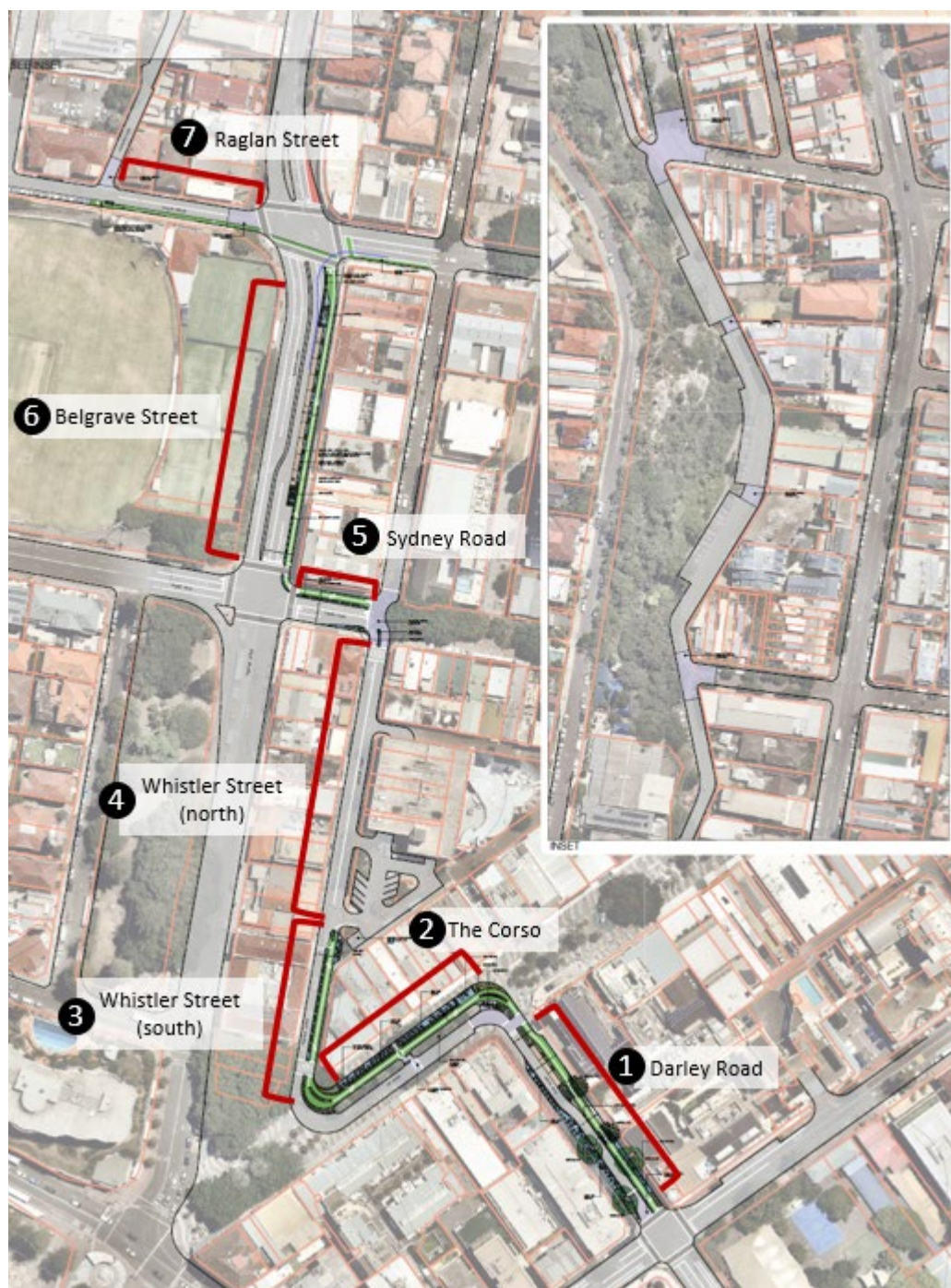


Figure 3 Road sections within the project area

2.1.1 Darley Road – Wentworth Street to The Corso

Currently, most of Darley Road is dedicated to motorised vehicle access and parking, comprising of one traffic lane in each direction and kerbside parking on each side of the road, as shown by this cross-section.

The western side of this section of Darley Road has a dining strip with several restaurants and cafes with limited or no outdoor seating space. The eastern side is mostly occupied by St Matthews Anglican Church and a post box.

The proposed activation work includes closing the southbound traffic lane and kerbside parking lane to make space for:

- Outdoor seating on the western side, which will provide more space for businesses as well as for pedestrians by freeing up the existing 4.3 metres of footpath
- A bi-directional cycleway protected by a buffer between the parking lane and cycleway.

Some kerbside parallel parking on the eastern side of Darley Road would be maintained to provide space for deliveries, post box access as well as the special needs of church functions (weddings and funerals in particular).

The cycleway then connects continuously with the eastern side of The Corso. The provision of a bi-directional cycleway allows for safe access for bicycles, minimising potential conflicts with motorised vehicles.

Figure 4 shows the proposed cross-section of Darley Road, facing north.

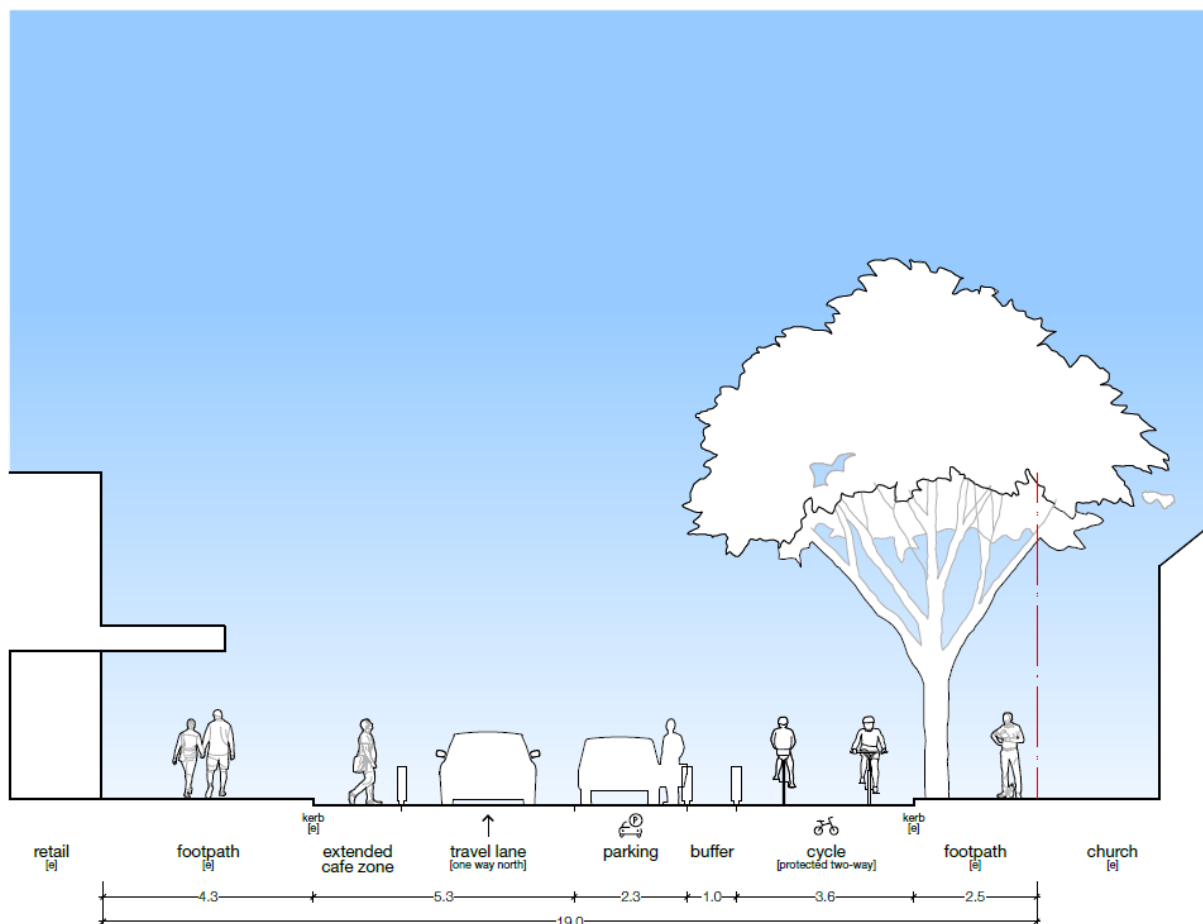


Figure 4 Proposed cross-section for Darley Road

2.1.2 The Corso – Darley Road to Whistler Street

Within the heart of The Corso, the current road environment facilitates low speed travel and an attractive pedestrian destination, with planting in the median strip that provides shade for visitors to the street. However, two-way traffic and the existing provision of short stay on-street parking along each side of the road encourages the use of vehicles to travel into the area for short errands and limits the space available for pedestrian movement.

The proposed arrangement includes:

- Closing the kerbside parking lane along the north-western side of The Corso to support local businesses by making space for seating (dine-in and takeaway)
- Closing the north-eastbound travel lane to provide a protected bi-directional cycleway
- Implement a formal pedestrian crossing across The Corso
- Installation of bicycle parking adjacent to the new outdoor seating.

This proposed layout provides continuity for the traffic coming from Darley Road and for the cycleway between Darley Road and Whistler Street.

Figure 5 shows the proposed cross-section for The Corso, facing north-east.

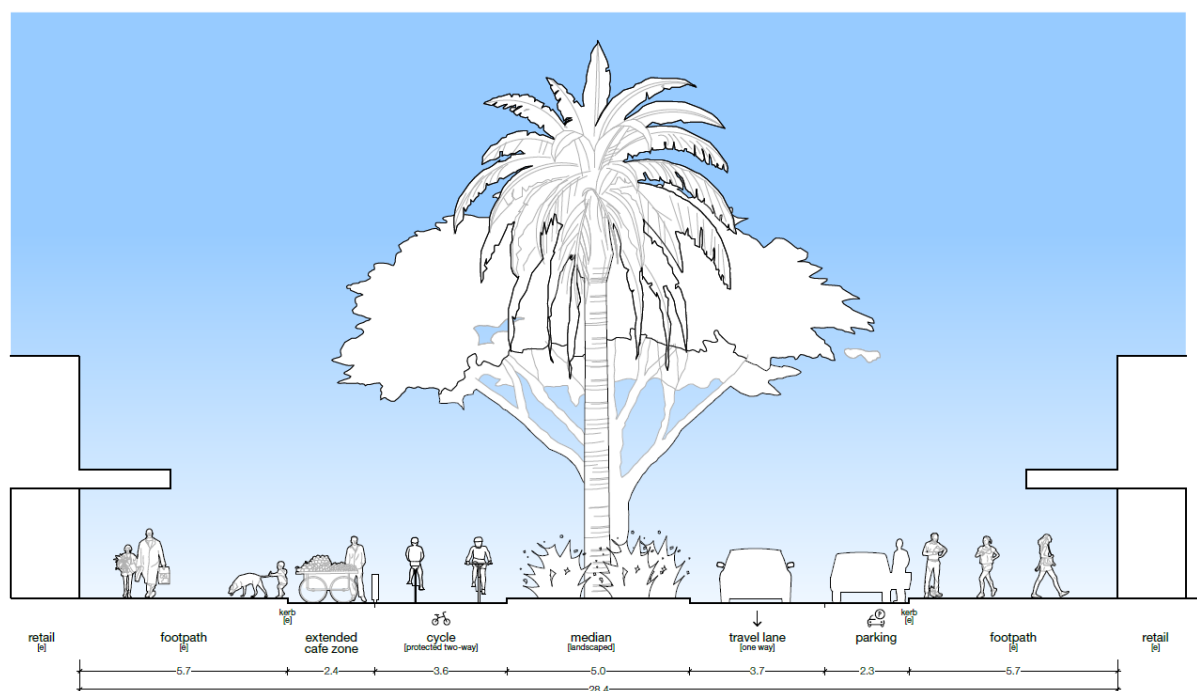


Figure 5 Proposed cross-section for The Corso

By keeping one kerbside parking lane, kiss and ride and deliveries to the area will still be accommodated. Delivery riders will safely access the restaurants and cafes on the north-western side of The Corso using the proposed bi-directional cycleway. Figure 6 shows an artist's impression of The Corso after the implementation of the cycleway on the eastbound lane. No changes are proposed to existing configuration on the southern side of The Corso, which will continue to serve westbound traffic and provide short-term on-street parking spaces.



Figure 6 Proposed connection between the Corso and Whistler Street

2.1.3 Whistler Street (south) – The Corso to the car park

The Corso connects to Whistler Street which is one lane in each direction until the intersection with Sydney Road, after which it converts to a one-way northbound street with kerbside parking.

The proposed arrangement includes:

- Closing the north-eastbound travel lane to provide a protected bi-directional cycleway
- Conversion of two parking spaces on the eastern side of Whistler Street south of Market Lane to a new café parklet
- Relocation of the motorcycle parking from The Corso to the outdoor car park on Whistler Street.

From The Corso to the Whistler Street car park (313 spaces) entrance, it is proposed to convert the southbound traffic lane to a protected bi-directional cycleway and to only keep the northbound traffic lane, in continuity with the proposed layout for The Corso. The proposed arrangement allows for additional space for seating and pedestrians near the café on the eastern side of Whistler Street.

Constraints regarding access to the back of the police station requires the section of Whistler Street, north of the Whistler Street car park to be two-way. Traffic calming will be provided to create a lower speed environment and encourage vehicles to stay within the proposed 10 km/h posted speed limit. This will support the transition between the dedicated cycleway and the low speed shared traffic lanes safe and coherent for cyclists and drivers.

Figure 7 shows the proposed cross-section for Whistler Street south of the car park, looking north.

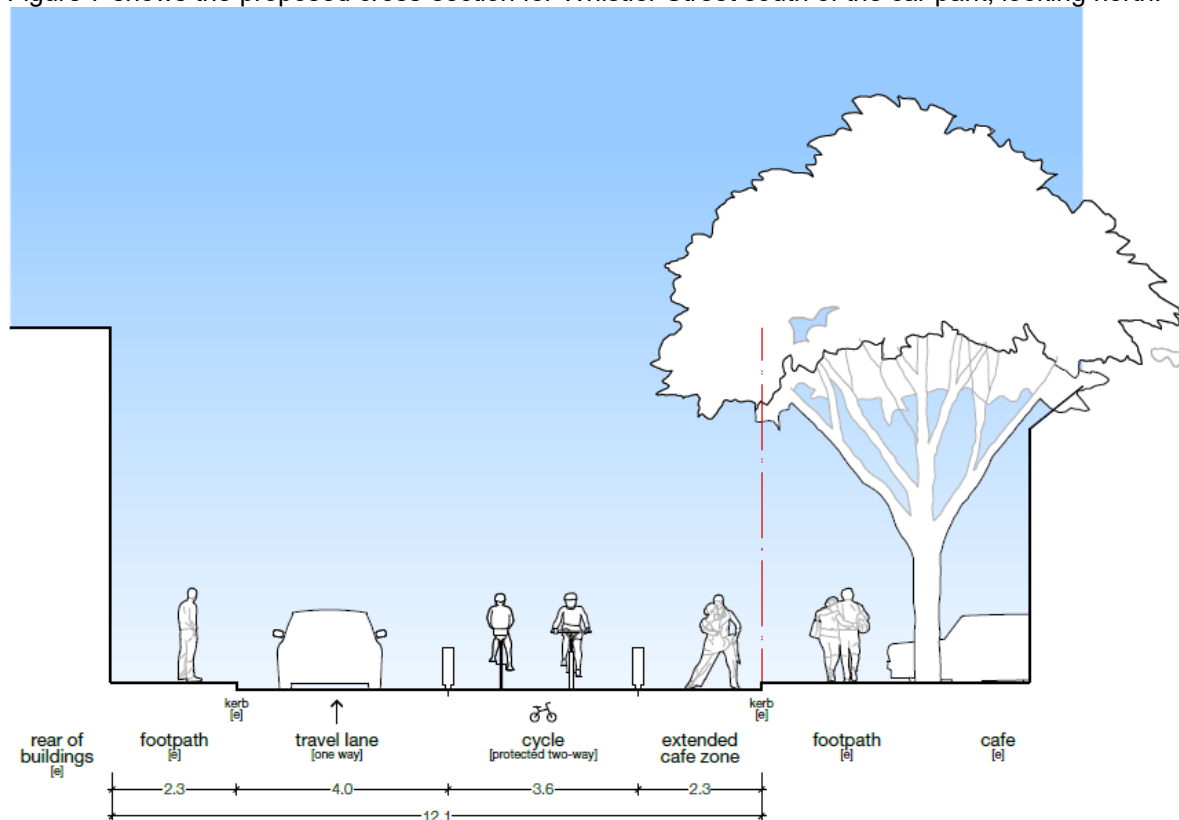


Figure 7 Proposed cross-section for Whistler Street (south)

The new proposed arrangement along Darley Road, The Corso and Whistler Street south of the car park are shown in Figure 8 and Figure 9.

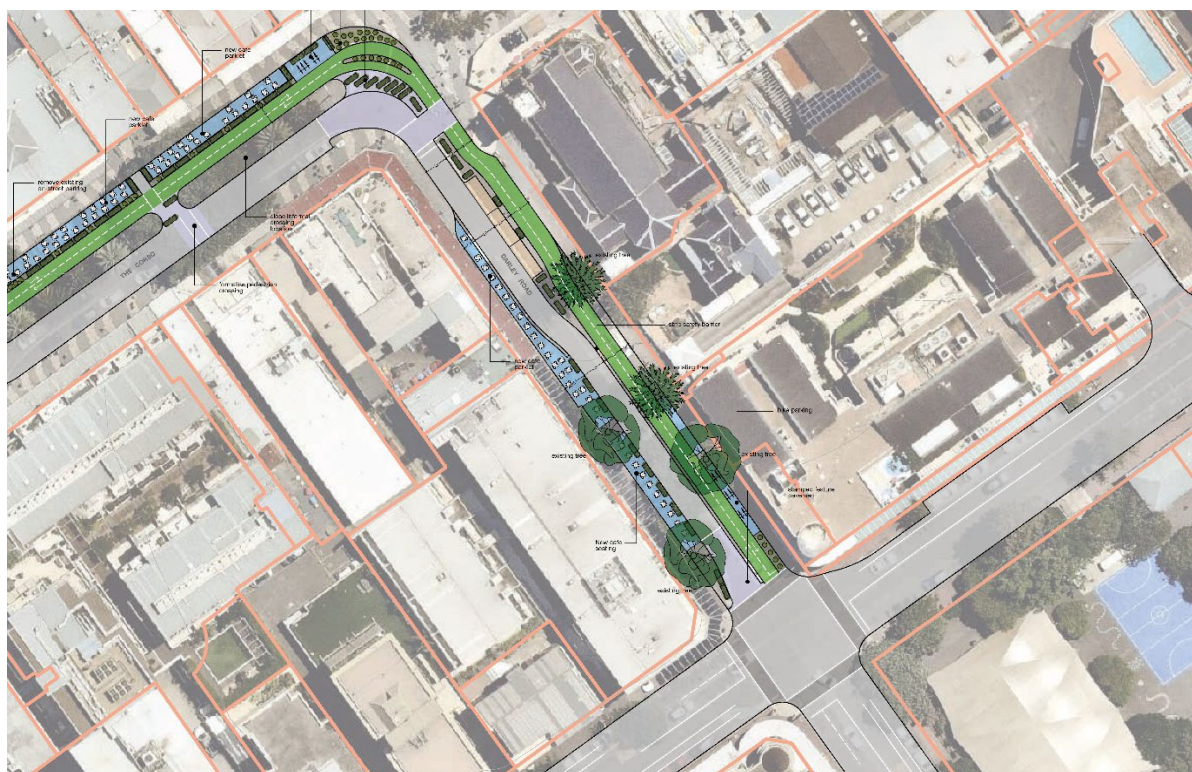


Figure 8 Darley Road and The Corso proposed configuration



Figure 9 The Corso and Whistler Street proposed configuration

2.1.4 Whistler Street (north) – Car park to Sydney Road

The current layout of Whistler street from the car park to Sydney Road will not be changed significantly by the proposed work, maintaining two-way traffic with a narrow footpath. The proposal includes changing the posted speed limit to 10 km/h and converting the road to a share zone, along with the implementation of any traffic calming that can be allowed by the limited space.

2.1.5 Sydney Road – Whistler Street to Belgrave Street

Sydney Road connects Whistler Street with Belgrave Street, a major north-south movement corridor in Manly. The intersection between Sydney Road and Whistler Street will function as a gateway to communicate the transition into a low speed area, which will be communicated to drivers through stamped pavement features, landscaping and the installation of planter boxes on the road.

A new bi-directional cycleway protected by a buffer will replace one of the existing eastbound lanes on Sydney Road, with lane narrowing and landscaping on the southern side of the street to facilitate slower speeds for westbound vehicles from Whistler Street. The cycleway will connect to the shared zone on Whistler Street to the south.

2.1.6 Belgrave Street – Sydney Road to Raglan Street

Belgrave Street is the major north-south movement corridor in Manly, with two lanes of traffic running in each direction. The street services numerous bus routes and connects to Raglan Street in the north.

The new protected bi-directional cycleway will continue onto Belgrave Street, where bicycle parking will be provided.

No kerbside parking is proposed to be removed. However, with the installation of the new cycleway, one southbound traffic lane on Belgrave Street will be converted to parking. Continuity for through traffic lanes on Belgrave Street north of Raglan Street and south of Sydney Road will be maintained through merge lanes.



Figure 10 Belgrave Street and Sydney Road proposed configuration

2.1.7 Raglan Street – Belgrave Street to Kangaroo Lane

The new cycleway on Belgrave Street to the north will connect with the existing painted cycle lane on Raglan Street to the east. An advanced stop line will be provided for left turning cyclists travelling northbound from Belgrave Street into Raglan Street, and stamped feature pavements will be provided at the entrance to Raglan Street and Kangaroo Lane to indicate vehicles are entering a lower speed zone. Figure 11 shows the proposed configuration along Raglan Street.



Figure 11 Raglan Street proposed configuration

2.2 Pedestrian access arrangement

The project proposes significant improvements to the existing pedestrian environment within the study area. Along The Corso and Darley Road, the provision of extended café zones onto the road will allow for the existing footpaths to service pedestrian movements exclusively, with the additional road space supporting the local businesses and providing visitors to the Manly town centre with areas to linger.

On Whistler Street north of the car park, the road will be converted to a 10 km/h shared zone, which will prioritise the safety of pedestrians and cyclists amongst two-way vehicle movements. The shared zone will continue until Sydney Road, at which point it will connect to the plaza and pedestrian footpaths on Whistler Street and Sydney Road.

A formal pedestrian crossing will be provided across The Corso, and the existing informal crossing will be closed. No changes are proposed to the marked pedestrian crossing at the intersection of Whistler Street and The Corso, and minor changes will be implemented to the pedestrian crossing at the intersection of The Corso and Darley Street as the southbound lane is closed.

The new proposed pedestrian access arrangements along The Corso are shown in Figure 8.

2.3 Cyclist access arrangements

Activate Manly proposes the provision of a safe cycling route between Darley Road to the south and Kangaroo Lane to the north.

The Darley Road cycleway is proposed along the eastern side of the street and will provide a dedicated link between Wentworth Street and the Whistler Street car park.

Along the southern section, the cycleway will connect directly to the existing cycleway on Darley Road south of Wentworth Street, as well as along Wentworth Street. An advanced stop line will be provided for cyclists at the Darley Road/ Wentworth Street signalised intersection, which will allow for safer movements at the intersection, particularly for right turning cyclists travelling west on Wentworth Street.

North of the Whistler Street car park, the cycleway will connect to a new 10 km/h shared zone, which will facilitate the safe movement of cyclists amongst pedestrian and two-way vehicle movements. The shared zone will continue until Sydney Road, with cyclists continuing onto the new protected bi-directional cycleway until the Belgrave Street/ Raglan Street intersection. At the intersection, the cycleway connects directly to the existing cycleway to Raglan Street to the east, and an advanced stop line will be provided for cyclists heading turning left onto Raglan Street to the west.

2.4 Vehicular access

The Active Manly project proposes to close the eastbound lane along The Corso and Darley Road to make space for a dedicated cycleway and café zones with seating to support nearby businesses. Vehicular movements north of the Wentworth Street intersection will be limited to northbound travel on Darley Road, The Corso and Whistler Street south of the Market Lane car park entrance.

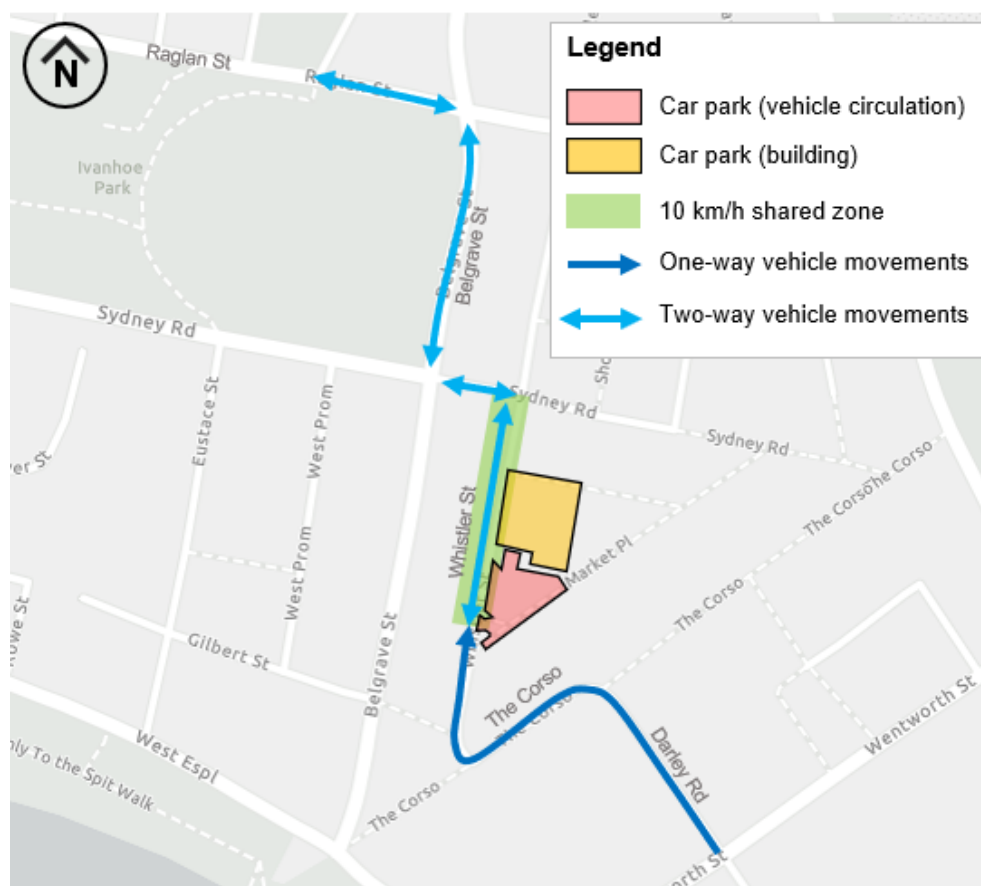


Figure 12 Vehicular movements in Manly

North of Market Lane, Whistler Street will be converted to a 10 km/h shared zone that will allow two-way vehicle movements into the car park, which will be used by visitors, employees and service and delivery vehicles.

2.4.1 Traffic circulation

An understanding of the existing traffic circulation around the Manly town centre was gathered through analysis of vehicle counts collected at traffic control signals. SCATS data was provided by Council for the purpose of this assessment for the following intersections:

- Sydney Road/ Belgrave Street
- Esplanade/ Belgrave Street
- Raglan Street/ Belgrave Street
- Wentworth Street/ Darley Road
- Wentworth Street/ East Esplanade.

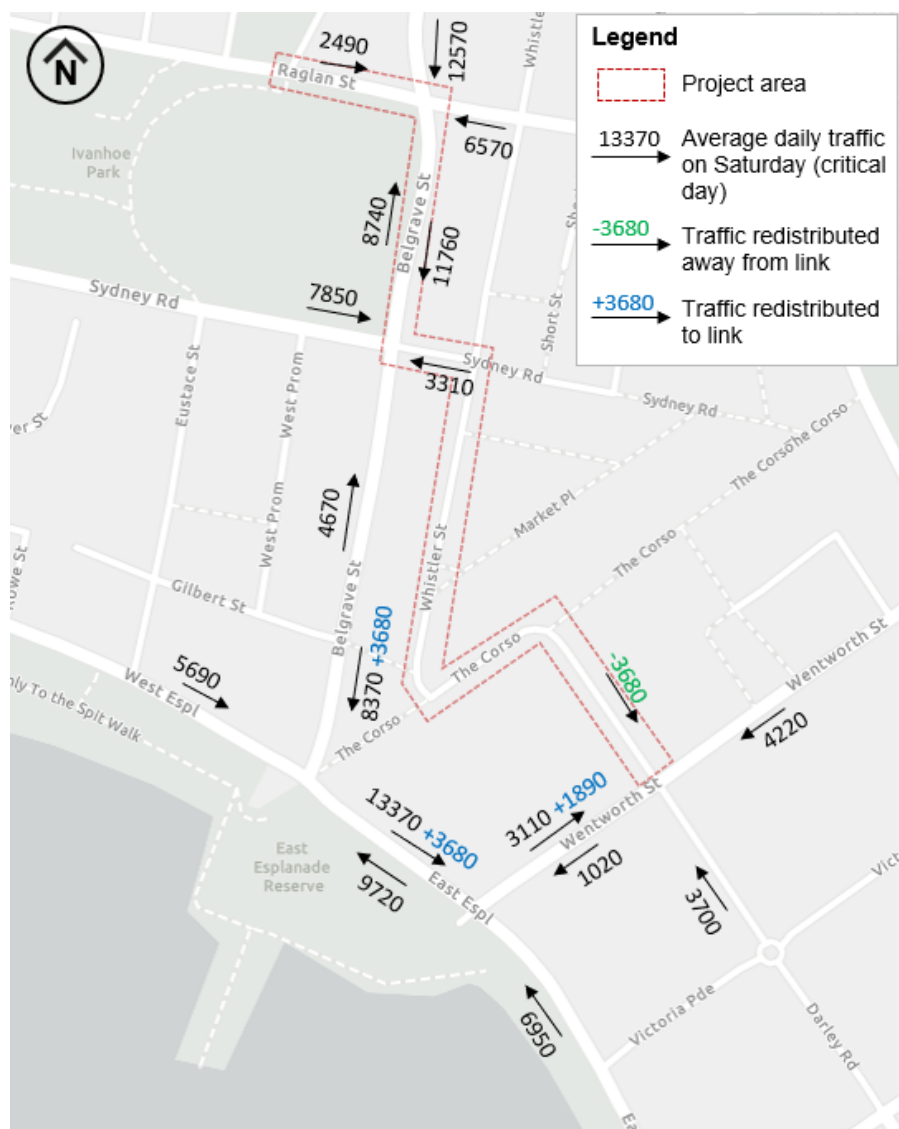
SCATS data collected during the one-week period between Monday 10 February 2020 and Sunday 16 February 2020 was analysed. Saturday was found to be the critical day for the network, with the greatest volumes of daily traffic recorded.

The proposal to close the eastbound lane on The Corso is estimated to result in the redistribution of about 3680 vehicles over a 24-hour period on the critical day of the week. These vehicles would be redirected to main roads, passing through Belgrave Street and East Esplanade.

The following is assumed of southbound vehicles on Darley Road, approaching from The Corso:

- About 35 per cent turn left onto Wentworth Street
- About 65 per cent continue south on Darley Road or turn right onto Wentworth Street.

75 per cent of all through and right turning traffic from the Darley Road north approach are assumed to continue travelling along East Esplanade under post-activation conditions, with 25 per cent turning into Wentworth Street to continue south on Darley Road. Figure 13 shows the distribution of vehicular traffic across the network on a typical Saturday, alongside the redistribution expected on key roads.



Note: Vehicles have been rounded to the nearest 10.

Figure 13 Daily traffic circulation around Manly town centre

A capacity assessment was undertaken of the intersections expected to be impacted by the rerouting of traffic. The peak hour volumes expected at the intersections were assessed, under the assumption that peak hour volumes account for about 9 per cent of total daily traffic.

- The typical mid-block capacity for urban roads with interrupted flow was adopted from the *Austroads Guide to Traffic Management Part 3* for the purpose of this assessment. In assessing the capacity available at an approach to an intersection, a volume to capacity ratio is considered, which reflects the ratio of demand flows to the theoretical capacity available for throughout of vehicles. A volume to capacity ratio of one indicates a mid-block section is at theoretical capacity. Esplanade/ Belgrave Street
- Wentworth Street/ East Esplanade
- Wentworth Street/ Darley Road.

Table 1 shows the volume to capacity ratio expected the following intersections as a result of the traffic redistribution from The Corso:

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- Esplanade/ Belgrave Street
- Wentworth Street/ East Esplanade
- Wentworth Street/ Darley Road.

Table 1 Capacity assessment of intersections with redistributed traffic

Intersection	Approach	Lane	Midblock capacity (pc/h)	Forecast demand (pc/h)	Volume/ capacity ratio
Belgrave Road/ Esplanade	Belgrave Road (north)	1	900	1080	0.39
		2	1000		
		3	900		
		Total approach	2800		
East Esplanade/ Wentworth Street	East Esplanade (west)	1	900	1530	0.85
		2	900		
		Total approach	1800		
Wentworth Street/ Darley Road	Wentworth Street (west)	1	900	450	0.25
		2	900		
		Total approach	1800		

Note: Vehicles have been rounded to the nearest 10.

The capacity assessment shows that traffic redistribution resulting from the closure of the eastbound traffic lane on The Corso can be accommodated adequately by the surrounding road network.

2.4.2 Intersection operation/ phasing arrangements

The proposed scheme will require temporary modifications to some of the existing traffic control signals (TCS) to restrict certain movements which will not be permitted at the following TCS locations:

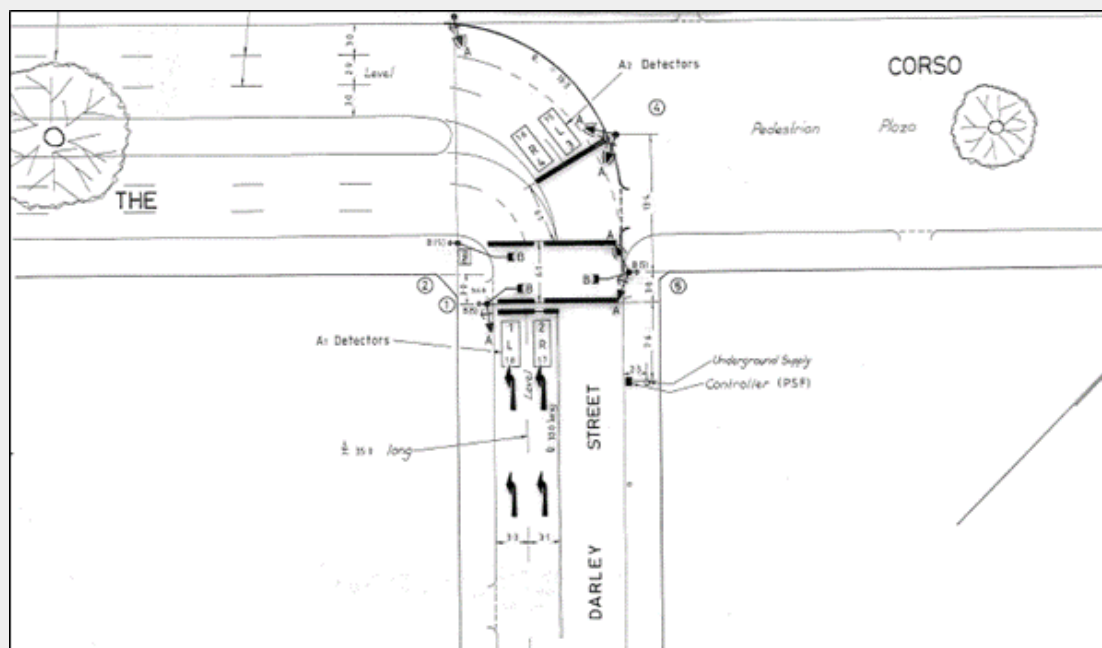
- Wentworth Street/ Darley Road intersection
- The pedestrian crossing at The Corso/ Darley Road.

Table 2 summarises the proposed modifications to these two TCS locations that are required to support the proposed scheme.

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Table 2 Proposed temporary modifications to TCS and intersection layouts

Existing arrangement (extract from TCS) – The Corso/ Darley Street

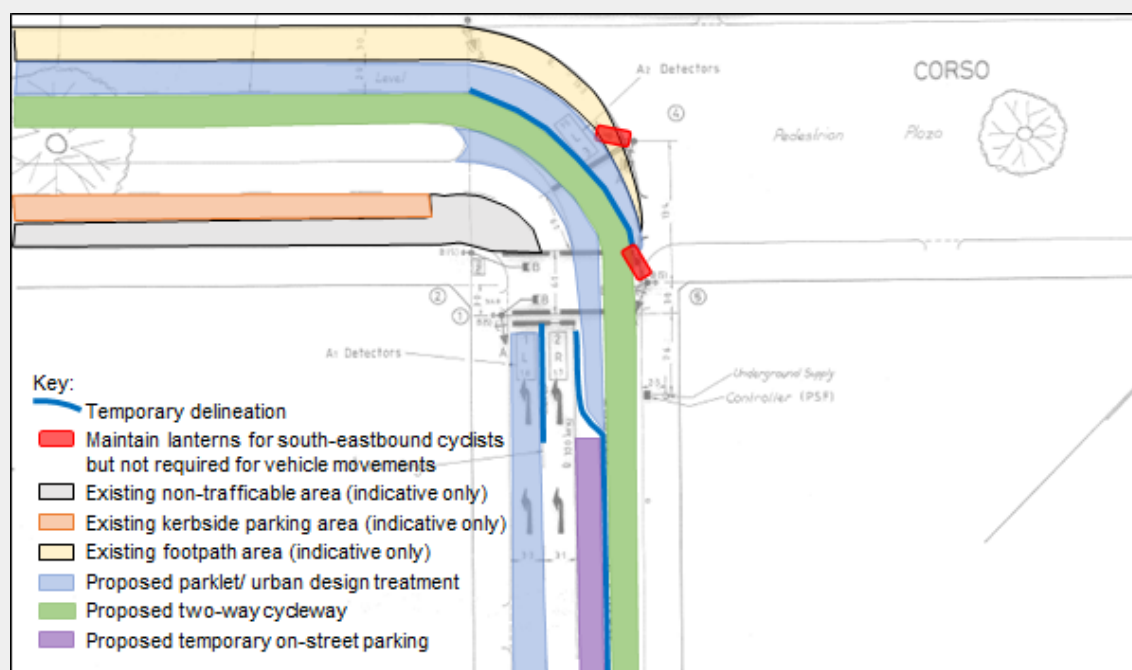


Source: Transport for NSW, 7000.279.VV.0622, date copy taken 23 October 2001

Notes:

The arrangement included in this version of the TCS plan has been modified to widen footpaths, provide kerbside parking on Darley Street and The Corso and provide one traffic lane in each direction on The Corso. The current layout is indicatively illustrated in the proposed modifications in the following sketch.

Proposed modifications to TCS – The Corso/ Darley Street

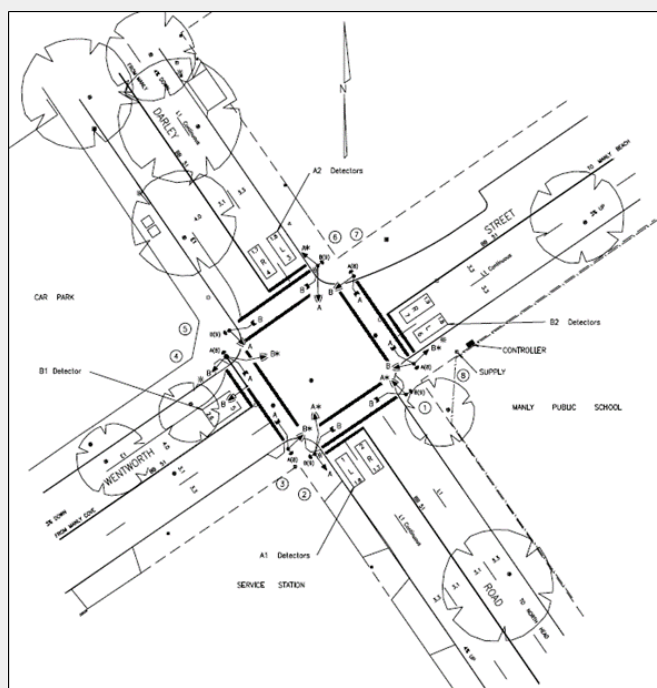


Notes:

- All redundant pavement markings and delineation are to be removed
- The lanterns indicated will be maintained for south-eastbound cyclist movements only and are not required for vehicles under the proposed one-way arrangement on The Corso and Darley Street.

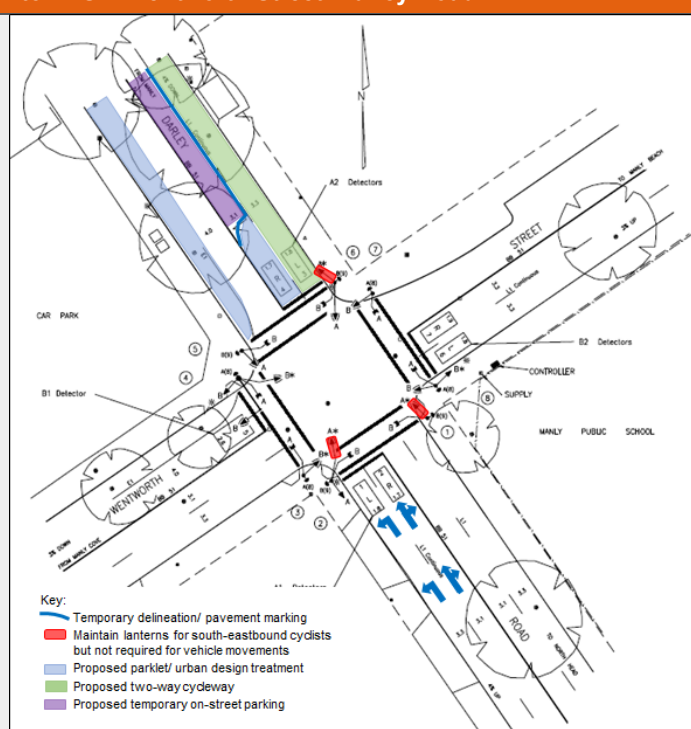
Existing arrangement (extract from TCS) – The Corso/ Darley Street

Existing arrangement (extract from TCS) – Wentworth Street/ Darley Road



Source: Transport for NSW, 7000.279.VV.0622, date copy taken 23 October 2001

Proposed modification to TCS – Wentworth Street/ Darley Road



Notes:

- All redundant pavement markings and delineation are to be removed
- The lanterns indicated will be maintained for south-eastbound cyclist movements only and are not required for vehicles under the proposed one-way arrangement on Darley Road.

2.4.3 Market Lane

Market Lane provides access for visitors to the Whistler Street car park, as well as for delivery vehicles that service various businesses in the town centre. The loading zone on Market Lane services numerous deliveries throughout the day, with delivery vehicles often causing congestion issues, blocking pedestrian access and causing bottleneck issues. At peak hours, delivery vehicles have been observed to stop and unload on the road, which exacerbates any existing issues.

Potential solutions for addressing the congestion caused by delivery vehicles include the provision of clear signage showing safe unloading areas. The existing off-street car parking layout outside the multi-storey Whistler Street car park is being investigated in consultation with Council to improve the loading arrangements within Market Lane.

2.5 Public transport

2.5.1 Ferry

Manly Wharf is located about 200 metres from the intersection of Whistler Street and The Corso, about a two-minute walk from the shopping strip. The Corso west of Whistler Street features wide footpaths, and the route between the wharf and shopping strip is direct, passing through one signalised intersection at Esplanade.

The project proposes changes to The Corso and Whistler Street that would reduce traffic movements and create greater pedestrian amenity along the shopping strip. While the pedestrian connection to the wharf will remain unchanged, the extension of road space allocated to active transport modes will improve the connectivity of The Corso across Whistler Street.

Figure 14 shows the location of Manly Wharf with proximity to the project area.

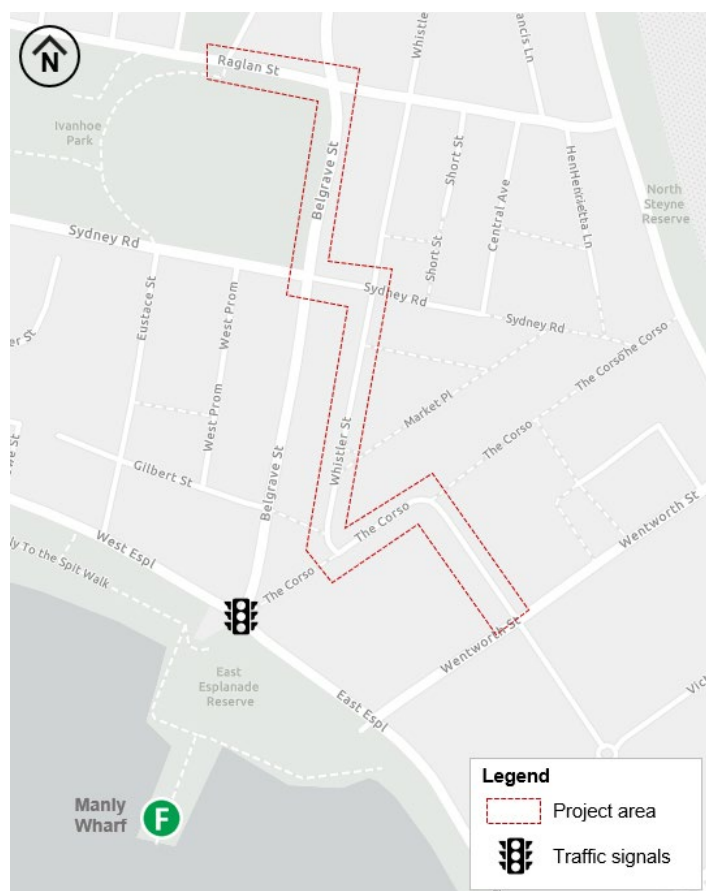


Figure 14 Manly public transport – ferry

2.5.2 Buses

Buses in Manly run through Raglan Street and Belgrave Street, connecting to Esplanade in the south. No routes currently pass through Darley Road, The Corso or Whistler Street.

The following two active bus stops are located within the project area:

- Raglan Street before Pittwater Road
- Manly Tennis Club, Belgrave Street.

An additional bus stop is located on the southbound side of Belgrave Street, north of Sydney Road. This bus stop is currently disused, and it is proposed to replace this bus stop and adjacent bus lane and jump start with the new cycleway.

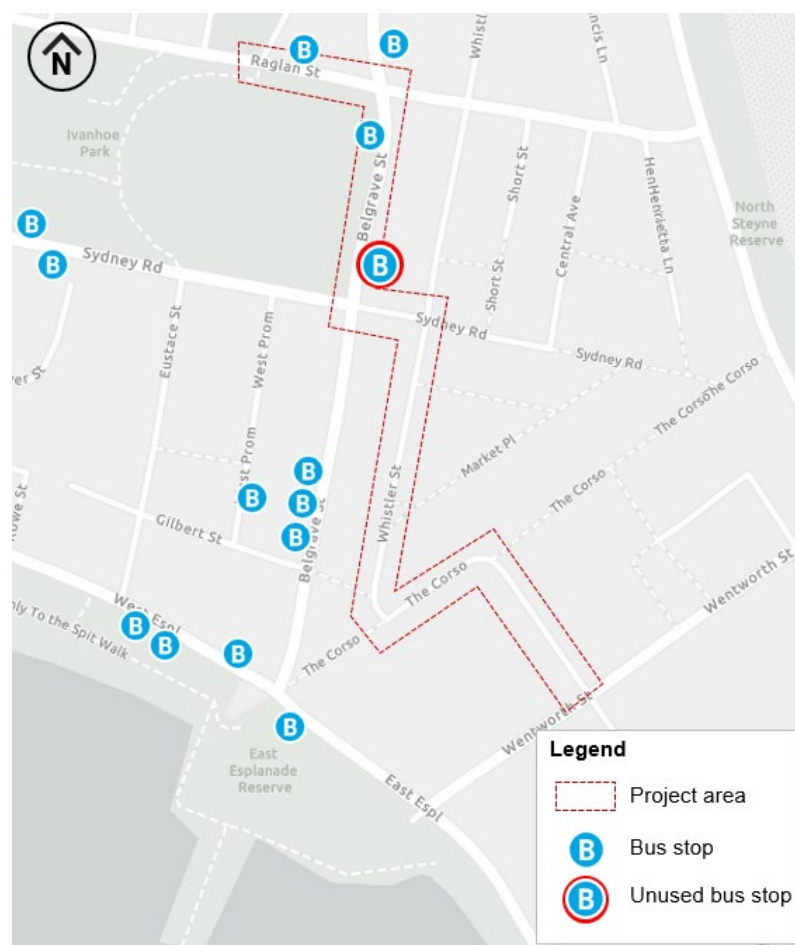


Figure 15 Manly public transport – Bus

2.6 Taxis

There are currently no taxi zones directly within the project area that could expect to be impacted by any changes proposed. The nearest taxi zone is located on Belgrave Street, north of Gilbert Street on the southbound side of the road. The taxi zone is easily accessible by pedestrians crossing through the square that is located between Whistler Street and Belgrave Street. Figure 16 shows the location of the taxi zone with respect to the project area.

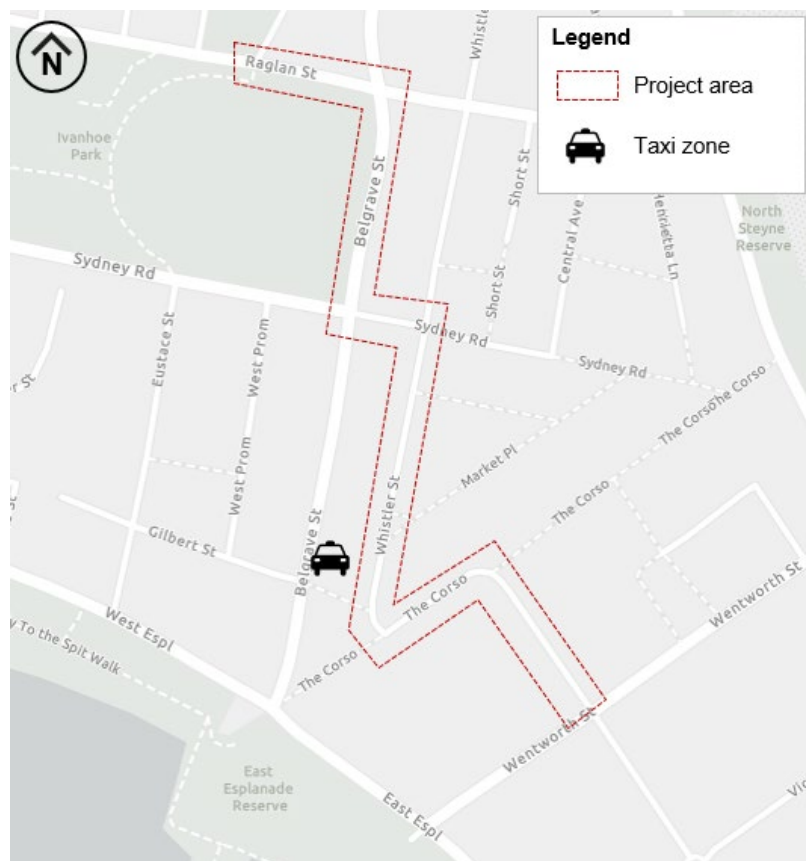


Figure 16 Manly taxi zones

2.7 Parking impact

The activation of Darley Road and The Corso requires the displacement of 21 parking spaces to make room for outdoor seating zones to support the food businesses. The project additionally proposes to reduce the remaining car parking on The Corso and Darley Road from a time limit of 30 minutes to 15 minutes to provide high turnover of vehicles. The existing motorcycle parking on the west side of The Corso is proposed to be relocated to the existing 5-minute parking bays located in the open car park on Whistler Street.

All parking spaces proposed to be displaced are short-term parking, allowing vehicles to dwell for 30 minutes or fewer. The vehicles displaced from the street parking spaces would be relocated to the Whistler Street car park, which has capacity for approximately 313 vehicles. While the car park is a paid car park, the first two hours of parking are free, allowing it to serve a similar function to visitors to The Corso who would have otherwise utilised the free street parking.

Table 3 provides an overview of the location and duration of street parking proposed to be displaced.

Table 3 Proposed displacement of parking spaces

Road name	Location	Duration	Road space reallocation	Number of displaced parking spaces
Darley Road	Western side of the street	30-minute parking	Outdoor seating	7
	Eastern side of the street	8am to 6pm every day	Cycleway	2
The Corso	North side of the street	30-minute parking 8am to 10pm every day	Outdoor seating	8
		2-hour motorcycle parking only		4 motorcycle parking
Whistler Street	South of car park	5-minute parking	Outdoor seating	2
Whistler Street car park	Outdoor, south of car park	30-minute parking 8am to 6pm every day	4 motorcycle parking	2
Total				21 car spaces

No changes are proposed to any of the loading zones currently serving the businesses in town centre, located on the southern side of The Corso and the western side of Darley Road. The short-term 30-minute parking on the southern side of The Corso are to be retained in the existing configuration and will continue to provide eight parking spaces for visitors.

2.8 Implementation of proposal

The Activate Manly project adopts the tactical urbanism approach to the implementation of proposed works, with a focus on using short-term, low cost and scalable interventions intended to drive long term change. The changes proposed are a temporary arrangement and will be treated as standard temporary traffic work.

Upgrade works would be planned and staged to minimise disruption to the network and pedestrian and cyclist environment. In the implementation of the proposal, the impact of the project should be clearly communicated to road users such as vehicles, pedestrians and cyclists as well as the community and business owners.

2.8.1 Network optimisation

Network optimisation strategies offset traffic impacts in the network surrounding the project area. This may include changes to facilitate effective use of available network capacity, such as:

- Planning traffic management measures, including modification to SCATS to ensure traffic signals adequately manage the new distribution of vehicles and minimise delay
- Promoting alternative routes that bypass the Manly town centre and the project area
- When performing works necessary to convert Whistler Street into a 10 km/h shared zone, the works should be undertaken during off-peak hours to minimise impacts on vehicles accessing the car park and loading docks via Market Lane
- Access through work sites would be managed by traffic controllers

2.8.2 Pedestrians and cyclists

As the Activate Manly project aims to provide active transport users within the town centre with improved safety and accessibility, it is important to ensure the implementation phase does not detract from the pedestrian and cyclist environment. Strategies to maintain pedestrian and cyclist amenity include:

- Minimise disruption to pedestrians and cyclists along existing routes and crossings
- Provide safe and amenable access for pedestrians for all stages of project implementation during day and night-time periods, including appropriate design of routes with suitable surfaces, lighting, and visibility
- Maintain pedestrian access to businesses during all stages of project implementation
- Manage potential conflicts between pedestrians and construction vehicles through appropriate traffic control.

2.8.3 Stakeholder and community engagement

It is critical to effectively and regularly inform the community and local businesses impacted by the construction work prior to commencement to manage the public's expectations. Advance notice should be provided to all road users (including bus operators) as well as property and business owners in The Corso.

This could be done by:

- Installing notice signs for all road users
- Local newspapers and pamphlet distribution
- Project information website
- Project newsletters
- Public notifications in local publications
- Websites for relevant road authorities
- Public notice boards and notices at public transport stops and stations.

Advanced notice of planned work and potential network disruptions through construction period would be provided. This may involve consultation with business owners, the preparation of information packs detailing the proposed construction activities and temporary arrangements for the following groups:

- Emergency vehicles
- Emergency evacuation plans
- Pedestrians and cyclists (including access to properties)
- Disability access
- Event management
- Waste collection and other service vehicles
- Deliveries
- Noise management.

3 MANAGEMENT MEASURES

A package of management measures is proposed to support the proposed Activate Manly scheme. The work required to implement the proposed scheme includes:

- Removal of existing redundant delineation and pavement markings
- Covering or temporarily removing existing redundant signage, including parking signs
- Installation of temporary traffic barriers and delineation
- Installation of threshold treatments
- Installation of regulatory signage
- Implementation of urban design elements, such as planter boxes and pavement artwork
- Pre-opening Road Safety Audit
- Regular inspections of the elements installed as part of the scheme.

The following subsections describe the management measures proposed for the Activate Manly scheme to prioritise pedestrians and cyclists and create more high-quality spaces for people.

3.1 Urban design elements

Urban design elements will be installed to add safe spaces in the public realm to provide community and commercial amenity and neighbourhood services to support the proposed scheme for Activate Manly. The following subsections describe the proposed urban design elements proposed.

Parklet – Temporary kerb extension

Parklets will be installed on the western side of Darley Road, replacing seven parking spots and the north-western side of the Corso. The parklets will provide additional sitting and waiting space for the half-dozen cafes and dining businesses on this side of the street. The parklet option being considered in Manly include temporary kerb extensions, which aim to provide more space for café patrons outside of the movement areas on existing footpaths.

In a tactical urbanism context, they can be quickly installed and defined with modular elements: planter boxes, pavement markings, platform, and street furniture. Alternatively, some parklets can be built offsite and then delivered to the site and maintained by the provider.

Universal access from the kerb can be provided with temporary ramps or with a modular platform built at kerb-level.

Examples of available parklets from Australian providers are shown at Figure 17 and Figure 18.



Figure 17 Movable parklet (on wheels) from People Parkers (Source: <https://www.peopleparkers.com>)

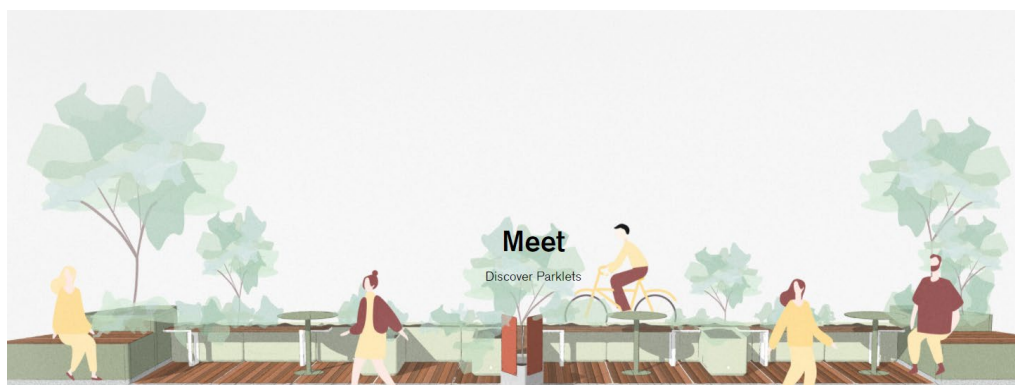


Figure 18 Modular parklet from Urban Commons (Source: <https://www.urbancommons.com.au/>)

Safety from moving traffic needs to be considered as well as accessibility from the existing footpath network. Implementation will be coordinated with dining/ café businesses on Darley Road.

3.2 Speed limits and control

Under the existing configuration, the Manly town centre is classified a high pedestrian activity area with a posted speed limit of 30 km/h along Darley Road, The Corso, Whistler Street, and the southern extent of Belgrave Street. Towards the northern extent of the project area, Belgrave Street and Raglan Street have posted speed limits of 50 and 60 km/h.

Activate Manly proposes to convert Whistler Street south of Sydney Road to a shared zone with a posted speed limit of 10 km/h, as shown in Figure 19.



Figure 19 Posted and proposed speed limits in Manly

Threshold treatments and traffic calming measures will be instated to signal to vehicles upon entry into the shared zone. The following measures will also be undertaken to facilitate a low speed environment:

- Prominent features such as signs and urban design features will be used to indicate a change in the street environment and highlight the start and end of the proposed shared zone
- Installation of pavement artwork will be used to highlight the changed traffic conditions, including tactile or coloured pavement, or stencilling of artwork
- Continuous footpath treatments will be considered at the entry and exit of the Whistler Street car park
- Shared zone entry signs will be provided on both sides of the road, for both the one-way approach from The Corso and the two-way approach from Whistler Street to further enhance the changes in environment and priority.

3.3 Delineation

Delineation of the proposed cycle lanes will be through a combination of:

- Lane separators between traffic lanes and the cycleway (refer to Figure 20 and the example of a temporary cycleway arrangement in Figure 21)
- Urban design elements such as planter boxes as shown in Figure 23
- Standard line marking (particularly lane separators on two-way cycleway)
- Green paint in locations of potential conflicts (driveways, intersections) as show at Figure 22, the paint used will have adequate skid resistance.



Figure 20 Lane separation treatment



Figure 21 Example of temporary cycleway delineation, City of Sydney. Source: TfNSW



Figure 22 Pitt Street pop-up cycleway, August 2020, source: Lise Chesnais



Figure 23 Planter boxes used to separate cycleway, source: NZ Ministry of Transport

3.4 Traffic control signals

All changes to signalised intersections require approval from Transport for NSW (TfNSW) through the development of TCS plans in accordance with TfNSW *Traffic Signal Design*. Changes to existing signalised intersections are temporary and are unlikely to include modifications to the infrastructure. Section 2.4.2 illustrates the proposed modifications to the intersection layouts superimposed on the exiting TCS plans.

Intersection works would be planned and staged to minimise disruption to the network. The following principles are recommended for any intersection works that are required:

- Partial or full closures would not be carried out during peak periods, limiting work to weekends or nights
- Closures would be staged in consultation with TfNSW and would aim to minimise the impact on the road network
- Coordination of major closures would be programmed during periods of reduced traffic such as during school holidays
- The community and stakeholders would be informed of intersection works in advance of closures and appropriate alternative routes would be identified and advertised prior to closures
- Pedestrian crossings would be managed appropriately maintaining safe and sufficient crossing opportunities at all stages of the works.

3.5 Construction hours

Construction times during the implementation of the scheme are proposed to occur between 7am to 6pm from Monday to Friday, in compliance with *NSW Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009). Some construction work, particularly around intersections, may be required at night-time to minimise disruption to the road network.

As Saturday is the critical day of the week experiencing the highest traffic demand and expected visitors, it is not recommended to undertake construction work during the standard Saturday hours of work. No construction work is proposed to occur on Sundays or public holidays.

As the construction noise guidelines are not mandatory and aim to inform the selection and application of work practices to minimise noise impacts, the construction period may be informed by consultation with local businesses to minimise the impacts within the Manly town centre.

3.6 Road safety audits

Road safety auditing is a formalised procedure, which can be applied to all phases of a road project or to an existing road. The auditor and audit team must be independent of the designer, so that the design is viewed with 'fresh eyes'. The purpose of the audit is not to rate the design, but rather identify any road safety concerns from the perspective of road users.

The objectives of a road safety audit are to:

- Review the operational site, design and background information and form conclusions about the safety performance and crash potential for the road
- Evaluate the operational site in terms of interaction with its surrounds and nearby roads and to visualise potential impediments and conflicts for road users
- Identify and report on aspects of the design that may result in unnecessary or unreasonable hazards for all road users.

Road Safety Audits are structured around standard checklists provided in the Austroads *Part 6: Road Safety Audit* and Roads and Maritime Service's *Guide to Road Safety Audit Practices* 2011.

For the proposal, Road Safety Audits would be undertaken at the following stages:

- **Design:** This audit stage involves the review of the design drawings, reports and supporting information and an inspection of the site, its approaches and connections. Standard issues such as sight distance, speed zones, safety barriers, alignment, delineation pedestrian facilities and signage (amongst others) are assessed with respect to safety
- **Pre-opening:** Prior to the opening of the completed work a Road Safety Audit is carried out during both day and night time periods to ensure that the work has been constructed to consider all previous Road Safety Audit findings, addresses site constraints appropriately and provides safe facilities for all road users.

3.7 Program of inspections

In addition to the Road Safety Audits detailed in Section 3.6, regular inspections are required to ensure that the traffic control measures and urban design elements implemented are safe for all road users, properly installed and undamaged.

It is anticipated that the scheme will be implemented for a period of 12 months. It is recommended that the arrangement is inspected monthly as a minimum.

3.8 Monitoring and evaluation approach

The process to deliver tactical urbanism projects generally follows a four-phase process as outlined in this section for consideration. This report covers planning and design and aims to plan for the implementation timing.



During the design and implementation phases it is essential to plan for the monitoring and evaluation of the project. The *Handbook for Tactical Urbanism in Aotearoa* (NZ Transport Agency, August 2020) recommends developing a Monitoring and Evaluation Plan and nominating a Monitoring and Evaluation Lead person, it defines monitoring and evaluation as follows:

- “Monitoring is the collection of information about a project’s activities and outputs. It is a critical piece of the Learn–Adjust–Improve feedback loop. It shows whether things are going to plan, highlights issues, and informs immediate modifications to the design.
- Evaluation involves determining whether a project is achieving what it set out to do. It uses the qualitative and quantitative data collected before and during the trial to judge success, improve effectiveness, and inform decisions.

In the case of Activate Manly monitoring and evaluation are focused on identifying whether the project is achieving its goals, answering questions such as:

Question / Goal	Indicator	Collection method	Collection timeline
Is the project making it safer to walk and ride in the area?	Number of near misses involving walkers / riders Feeling of safety Number of children riding without adult supervision	Visual survey counts of near misses during peak times (weekend, AM, PM) On site survey of people walking and cycling	Before and after implementation
Has the project increased the number of people walking and cycling?	Number of people walking and cycling	Counts	Before construction and then one month, three months and six months after completion.
Has the project increased retail /dining revenue?	Revenue of dining/café businesses Revenue of retail	Survey of businesses (with identification of whether they directly benefit from a new parklet or not)	Before and after implementation
How can the project be improved to better achieve its goal?	Community and visitors' satisfaction and feedback	Online survey In person survey, if possible, at community events or via a local "survey" stall. Questions framed more around "how can the project be improved?" rather than "do you support or oppose the project?"	After implementation

The "after" timeframe will be identified by the project team, it can be beneficial to leave some time for the street users to adapt their behaviour to the change after construction, a three months period could be a good basis.

Lastly, analyse collected data and evaluate effectiveness and whether goals were achieved, whether adjustments should be made to the project as needed. Potentially, adjust the project and start a new round of evaluation to refine design and implementation before transitioning it to permanent.

4 SUMMARY OF ACTIONS

This Traffic Management Plan highlights a wide range of actions to be implemented before, during and after construction. They are summarised in Table 4.

Table 4 Summary of actions

Theme	Before construction	During construction	After construction
Community/ stakeholder engagement (to be confirmed in consultation with Council)	Notice signs Advance notice provided to all road users Engagement on proposed scheme and construction times	Complaints management	Opening event Engagement stall for locals and visitors
Road Safety Audit	Carryout a Road Safety Audit of the design and modify arrangement to respond to audit findings		Carry out a pre-opening Road Safety Audit to confirm the installation of management measures is safe prior to opening
Urban design elements	Confirm type of parklet (for example, built on site or off site, modular or freestanding) Select provider and order parklets/ parklet modular elements Engage businesses on usage of parklets	Implementation of urban design elements, such as planter boxes, parklets and pavement artwork	Handover of planter maintenance and watering to relevant Council team
Traffic signal modifications	Temporary TCS designs for modifications to be submitted for approval by TfNSW (if required)	Implementation of TCS modifications by an accredited traffic signal controller (if required)	
Monitor and evaluate	Create monitoring and evaluation plan. Select monitoring and evaluation lead “Before” counts and surveys: plan and implement		“After” counts and surveys. Adjustments to arrangement following surveys (as required)
Construction management	Prepare Traffic Guidance Scheme to manage traffic during construction and ensure safe construction zones for the proposed work	Implement approved Traffic Guidance Scheme Provide safe and amenable access for pedestrians	
Other management measures		Removal of existing redundant delineation and pavement markings Covering or temporarily removing existing redundant signage, including parking signs Installation of temporary traffic barriers and delineation associated with the arrangement Installation of threshold treatments Installation of regulatory signage	